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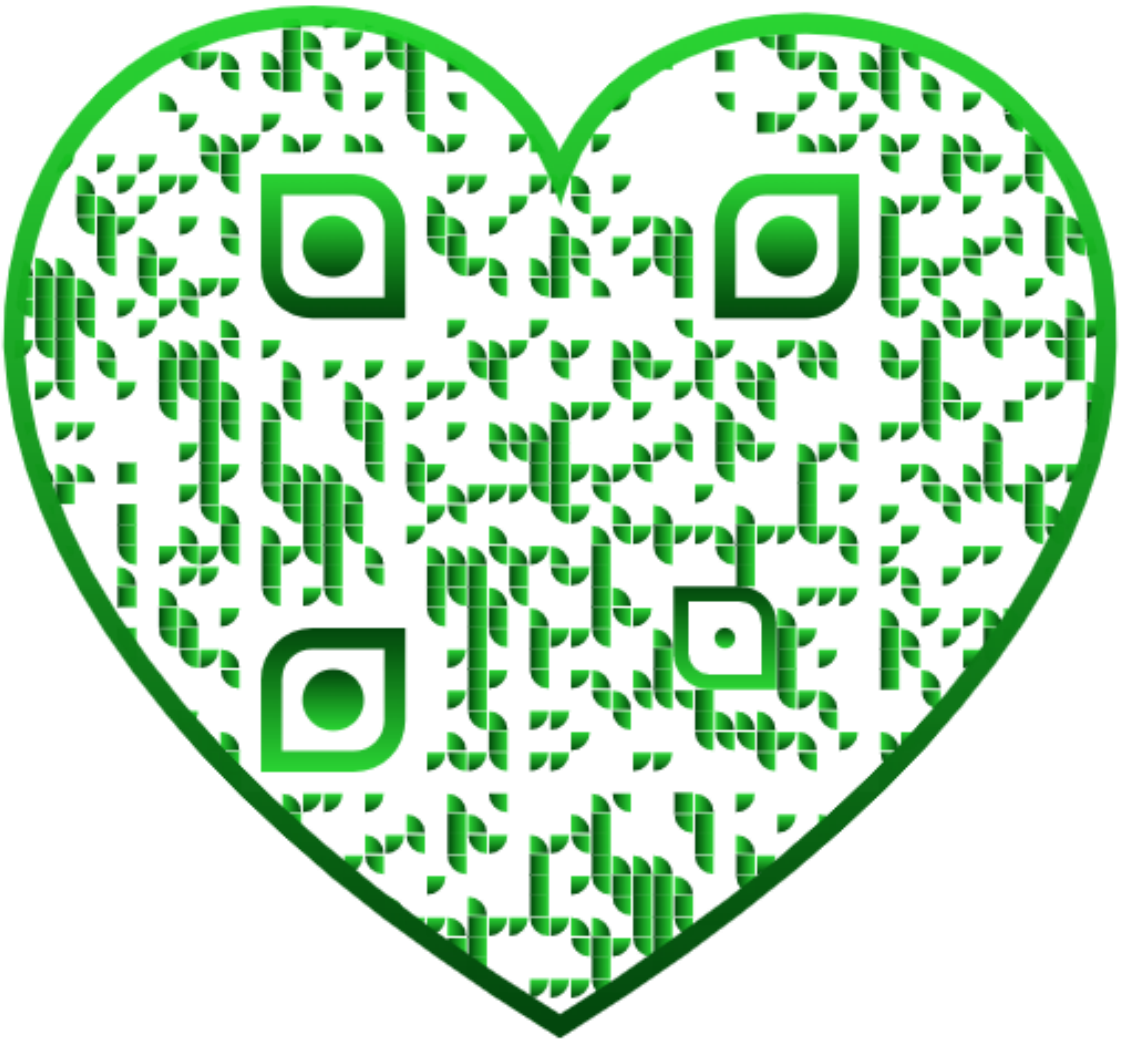
18
FEB

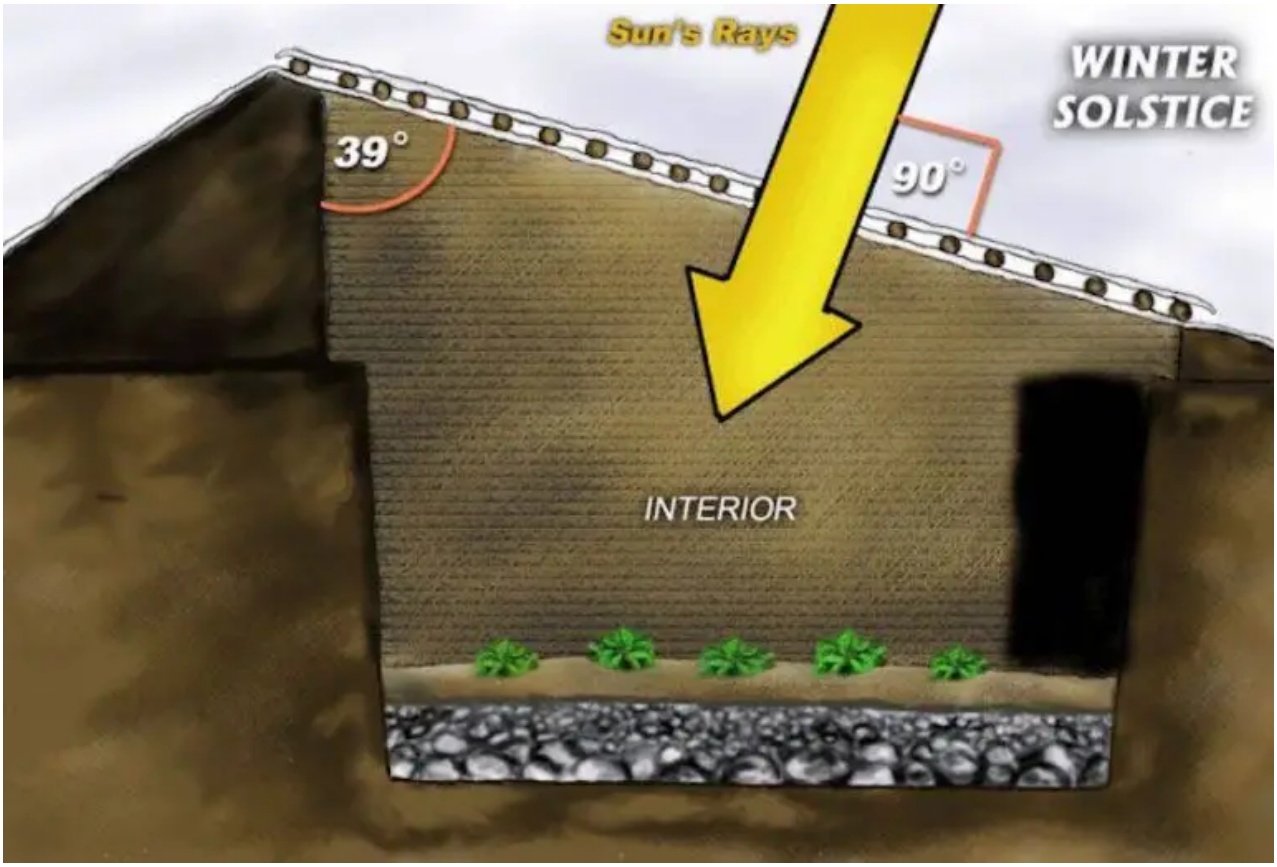
Build A $300 Underground Greenhouse For Year-round Fresh Food

Growers in colder climates often utilize various approaches to extend the growing season or to give their crops a boost, whether it's coldframes, hoop houses or greenhouses (https://seedtocrop.net/2019/03/9-most-popular-vegetables-to-grow-in-a-greenhouse/).

Greenhouses are normally coated structures, yet are usually costly to build and heat up all through the winter. A significantly more reasonable and successful choice to glass greenhouses is the walipini (an Aymara Indian word for a "place of warmth"), otherwise called an underground or pit greenhouse. First created more than 20 years ago for the cool rugged locales of South America, this technique enables gardeners to keep up a productive greenhouse all year, even in the coldest of climates.

How a *Walipini* works and how to build one





It's an entirely captivating set-up that joins the standards of aloof sunlight based heating with earth-shielded building. Be that as it may, how to make one? From American sustainable agriculture non-profit Benson Institute (https://www.ldscharities.org/news/benson-institute-integrated-into-lds-charities)comes this edifying manual on how a walipini functions, and how to construct it:

The Walipini utilizes nature's resources to provide a warm, stable, well-lit environment for year-round vegetable production. Locating the growing area 6' to 8' underground and capturing and storing daytime solar radiation are the most important principles in building a successful Walipini.

The Walipini, in simplest terms, is a rectangular hole in the ground 6 ' to 8' deep covered by plastic sheeting. The longest area of the rectangle faces the winter sun — to the north in the Southern Hemisphere and to the south in the Northern Hemisphere.

A thick wall of rammed earth at the back of the building and a much lower wall at the front provide the needed angle for the plastic sheet roof. This roof seals the hole, provides an insulating airspace between the two layers of plastic (a sheet on the top and another on the bottom of the roof/poles) and allows the sun's rays to penetrate creating a warm, stable environment for plant growth.

BENSON INSTITUTE

This earth-sheltered greenhouse takes advantage of the warm mass of the earth, so that much less energy is needed to heat up the walipini's interior than an aboveground greenhouse. Obviously, there are safety measures to take in waterproofing, drainage and ventilating the walipini, while adjusting it appropriately to the sun – which the manual covers in detail.

The best part is that as per the Benson Institute, their 20-foot by 74-foot walipni field model out in La Paz cost around $250 to $300, because of the utilization of free work given by proprietors and neighbors, and the utilization of less expensive materials like plastic ultraviolet (UV) protective sheeting and PVC piping.

Cheap but effective, the underground greenhouse is a great way for growers to produce food year-round in colder climates. More over at the Benson Institute (http://www.bensoninstitute.org/Publication/Manuals/Walipini.pdf) and the Pure Energy Systems Wiki (http://peswiki.com/index.php/Directory:Walipini_Underground_Greenhouses).

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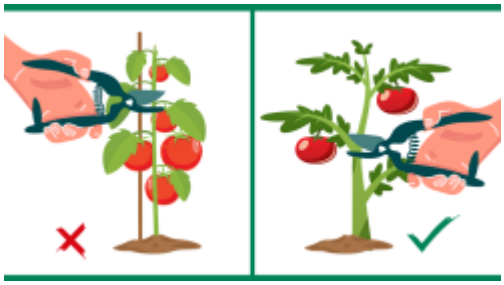

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6 thoughts on " Build A $300 Underground Greenhouse For Year-round Fresh Food"

John Stone **(May 4, 2020 - 5:05 pm)**

Reply

where do i get the plans on how to build this

Steve Wilde **(May 26, 2020 - 7:56 pm)**

Reply

I would like to have the plans for an underground Greenhouse.

Thanks

harold beasley **(August 18, 2020 - 8:27 pm)**

Reply

Please send plans on how to build the underground greenhouse.
Thanks,Harold

Sherri Treeby **(September 30, 2020 - 12:03 pm)**

Reply

I want to build one! Love this!

Cindy Massis (http:// Patchesofhope.innov8tivenutrition.com) **(October 1, 2020 - 4:02 pm)**

Reply

Ah to have fresh veggies from your own garden all year round!

Alexis Tufino **(October 9, 2020 - 6:25 pm)**

Reply

How can i get the plans for a under ground greenhouse?

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